ABSTRACT OF THE DISCLOSURE

A system method for transmitting/receiving frames of a MAC (Medium Access Control) protocol layer module that processes data frames and control frames transferred from a MANET (Mobile Ad Hoc Network) protocol layer module in a station receiving frames transmitted through a MANET including a plurality of stations. The method comprises: (1) distinguishing between control frames and data frames in analyzing frames transferred from the MANET protocol layer module; (2) providing the control frames with higher priority than the data frames so that the control frames firstly preempt a medium earlier than the data frames; and (3) transmitting the control frames and the data frames in order according to their respective priorities. By the construction, the control frames are processed first in preempting a medium, before the data frames, in the MAC layer of a station in which the MANET exists, thereby preventing the data loss caused by transmitting the data frames first.